

A-TYPE ZEOLITE BEAD COMPACT AND ITS PRODUCTION

Patent Number: JP11246214
Publication date: 1999-09-14
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Requested Patent: ☐ JP11246214
Application Number: JP19980051640 19980304
Priority Number(s):
IPC Classification: C01B39/18; B01D53/02; B01J20/18
EC Classification:
Equivalents:

Abstract

PROBLEM TO BE SOLVED: To obtain a bead compact having high absorptivity and excellent strength property by constituting the compact consisting of a A-zeolite powder and a fibrous one-dimensional structure clay binder having a specified value or larger pore volume and pore surface area.

SOLUTION: This compact has ≥ 0.25 cc/g pore volume and $\geq 20 \text{ m}^2/\text{g}$ pore surface area. This A-type zeolite is preferably a synthetic Na-type zeolite. As for a fibrous one dimensional structure clay binder, the binder contains sepiolite-type clay or attapulgite-type clay and is preferably in an accular crystal state. The A-zeolite powder is mixed and kneaded with the clay binder of a fibrous one-dimensional structure such as the sepiolite-type or attapulgite-type clay by 15 to 25 pts.wt. to 100 pts.wt. of the zeolite powder based on its anhydride and water, to become 0.8 to 1.0 kg/l bulk density. Then, the kneaded material is formed into beads by a blade-stirrer-type rotary granulating machine. Thereafter, the beads are calcined, ion-exchanged and activated to obtain the bead compact.

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